

USSR / Forestry. Forest Crops

K-4

Abs Jour: Ref Zhur-Biol., No 13, 1958, 58414

Author : Voloshin, M. P. , Romashkin, A. I.

Inst : State Nikitskiy Botanical Garden

Title : An Experiment in Implanting Exotic Trees in the
Forests of the Southern Shore of Crimea

Orig Pub: Byul. nauchno-tekhn. inform. Gos. Nikitsk. bo-
tan. sad, 1957, No 3-4

Abstract: It was established by a study of plantings on
the southern shore of Crimea, that oriental
spruce, common spruce, European larch, Caucasian
white fir and certain other kinds of trees grow
successfully in the upper belt (from 750 meters
up). Mediterranean varieties of the white fir

Card 1/2

45

KANAVETS, P.I.; GESS, B.A.; SPORIUS, A.E.; CHERNYSHEV, A.M.;
MELENT'YEV, P.N.; GHERNYKH, V.I.; KHROMYAK, R.P.;
KHAYLOV, B.S.; BORISOV, Yu.I.; TSYLEV, L.M.; SOKOLOV, V.S.;
Prinimali uchastiye: MARKIN, A.A.; GORLOV, M.Ya.;
VORONOV, Yu.G.; BULAKHOV, K.A.; KREMYANSKIY, V.L.; ARSHINOV,
G.P.; MAZUN, A.E.; PISARNITSKIY, I.M.; BOKUCHAVA, O.A.;
KIRILLOV, M.V.; TSELUYKO, P.I.; POLYAKOV, G.O.; REZKOV, A.S.;
ZHUCHKOV, M.I.; ROMASHKIN, A.S.; ZUBKOV, A.S.; KOZLOV, N.N.

Pilot plant for the nodulizing of finely ground charge mix-
tures by the method of chemical catalysis. Trudy IGI 22:
93-109 '63. (MIRA 16:11)

ROMASHKIN, I., brigadir plotnichno-stolyarnoy kompleksoy brigady

Work of our mixed brigade. Zhil.-kom. khoz. 8 no.9:26 '58.
(MIRA 11:10)

1. Shestoye stroitel'noye upravleniye Baumanskogo remontno-
stroitel'nogo tresta g. Moskvy.
(Building)

ROMASHKIN, I.

On the first presentation. Prof.-tekh. obr. 21 no.12:16 D '''
(MIRA 18:2)

I. Sekretar' komiteta Vsesoyuznogo Leninskogo kommunisticheskogo
soyuza molodezhi professional'no-tekhnicheskogo uchilishcha No.41,
Saratov.

POPOVICHENKO, R.M.; ROMASHKIN, M.I.

Studying the function of the catalytic cleaner for exhaust gases
from diesel engines of mining machinery. Vest. AN Kazakh. SSR 16
no. 12: 10-18 D '60. (MIRA 14:1)

(Mine gases)

(Gases--Purification)

ROSMAN, Y.S.: ROSENTHAL, M.P.

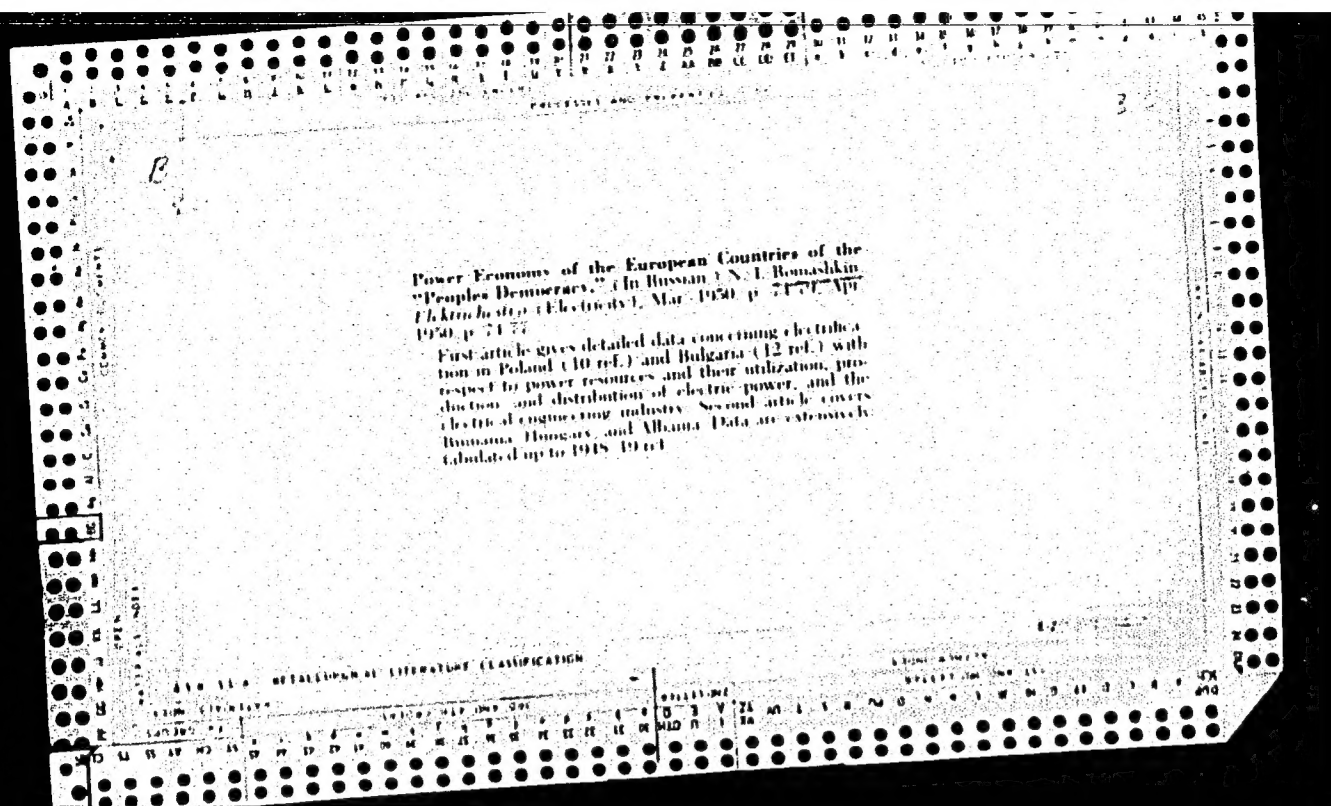
Acid monazo dyes with a polysulfonamide azo constituent. Dokl.
LPI 5 no. 1/2:176-182 '63. (MIRA 17:6)

12.12, N.P.

Preparation of insoluble (in water) polyides of 2,3-dihydroxypropionic
acid containing sulfonamide bonds. (Pat. No. 5, no. 17213, 1987)
(MIRA 1749)

F
1558. POWER ECONOMY OF EUROPEAN PEOPLES' DEMOCRACIES: BULGARIA.
Rousselin, Nl. (Elektrichentvo, Mar. 1950, (3), 74-79).
The survey shows that potential resources of the country are
very great, though only in the initial stage of systematic
exploitation. The wealth of the country in all kinds of
coal is remarkable, nor is there a lack of water power.
Details are given of the planned Bulgarian grid of 1, 279 km
length (110 kv), with 548 km. subsidiary lines (60 kv)
and 6,950 km distribution lines (15-20 kv) to the supplied
by 16 hydropower and 2 thermal power stations erected during
the five year plan.

SA



BALEK, A. [Bálek, Alexej]; DANEK, S. [Daněk, Stanislav], inzh.; FOFF, A. [Foff, Arthur], inzh.; KOLVODA, Ya. [Kolvoda, Jan], doktor; SHMID, I. [Schmid, Josef], inzh.; SHKVR, I. [Škvor, J.], doktor; VAYTTS, A. [Waitz, Antonín], inzh.; ROMASHKIN, N.I. [translator]; VEKSHIN, G.K. [translator]; TKACHEVA, T.K. [translator]; OSTROUMOVA, V.S., red.; SEMENOVA, N.Kh., red.; KAPRALOVA, A.A., tekhn.red.

[General inventory of fixed assets in Czechoslovakia] General'naiia inventarizatsiia osnovnykh fondov v Chekhoslovakii. Moskva, Gos. statist.izd-vo, 1959. 101 p. (MIRA 13:2)
(Czechoslovakia---Inventories)

Country : USSR T
CATEGORY : Human and Animal Physiology, Internal Secretion
ABST. JOUR. : RZhBiol., No. 5, 1959, No. 22251
AUTHOR : Romashkin, N.V.
INST. :
TITLE : The treatment of Patients with the Hyperthyroid
Form of Goiter with Radioactive Iodine.
ORIG. PUB. : Vrachebn. delo, 1958, No. 5, 501--504
ABSTRACT : no abstract

Card: 1/1

USSR

DU-499

28 Apr 61•

ROMASHKIN, P., is author of source article
on "The Socialist State and Communist
Autonomy".

Partiynaya Zhizn' No. 9, May 1961

*Source signed for press

12/3

(1)

ag

30(8)

AUTHOR:

Romashkin, P. S., Corresponding
Member, Academy of Sciences, USSR

SOV/30-58-12-26/46

TITLE:

Short Communications (Kratkiye soobshcheniya)
Scientific Conference on Legal Problems in the Socialist
Countries (Nauchnaya konferentsiya po voprosam zakonnosti v
sotsialisticheskikh stranakh)

PERIODICAL:

Vestnik Akademii nauk SSSR, 1958, Nr 12, pp 83-84 (USSR)

ABSTRACT:

This conference was convened by the International Association of Jurisprudence (MAYuN) in coordination with the research program of the UNESCO and was held in Warsaw in September of this year (1958). The conference had been prepared by the Committee of Jurisprudence of the Polish Academy of Sciences under the supervision of the renowned jurist S. Rozmaryn by order of the MAYuN. It was attended by 119 jurists from 22 countries. The Soviet Union sent a delegation consisting of P. S. Romashkin, V. M. Chkhikvadze, P. Ye. Orlovskiy, N. K. Morozov, Kh. S. Suleymanova, S. L. Zivs, G. I. Petrov, P. Ye. Nedbaylo, and V. A. Pavlov. The jurists from the USSR and the Popular Democracies in their reports gave evidence of the creation of a

Card 1/2

ARZUMANYAN, A.A., akademik; BERG, A.I., akademik; ZHUKOV, Ye.M., akademik;
SEMEYOV, N.F., akademik; VINOGRADOV, V.V., akademik; FRANTSEV, Yu.P.;
SHCHERBAKOV, D.I., akademik; ANISIMOV, I.I.; GATOVSKIY, L.M.;
IOVCHUK, M.T.; FEDOSEYEV, P.N., akademik; ROMASHKIN, P.S.; KONSTANTINOV,
F.V.; MITIN, M.B., akademik; YELYUTIN, V.P.; PLOTNIKOV, K.N.;
PRUDENSKIY, G.A.; YUDIN, P.F., akademik; RYBAKOV, B.A., akademik;
KONSTANTINOV, B.P., akademik; KHVOSTOV, V.M.; KEDROV, B.M.; MARKOV,
A.A.; BAISHEV, S.B., akademik; ALEKSEYEV, M.N., prof.; SKAZKIN, S.D.,
akademik; ALEKSANDROV, A.D.; POSPELOV, P.N., akademik

Discussion of L.F. Il'ichev's report. Vest. AN SSSR 32 no.12:19-50
D '62. (MIRA 15:12)

1. Chleny-korrespondenty AN SSSR (for Aleksandrov, Frantsev,
Anisimov, Gatovskiy, Iovchuk, Romashkin, Konstantinov, Yelyutin,
Plotnikov, Prudenskiy, Khvostov, Kedrov, Markov). 2. AN Kazakhskoy
SSR (for Baishev).

(Research)

SISAKYAN, N.M., akademik; MINIS, I.I., akademik; SATPAYEV, K.I.; akademik;
FRUMKIN, A.N., akademik; SHEMYAKIN, M.M., akademik; SOBOLEV, S.L.,
akademik; SHULEYKIN, V.V., akademik; BITSADZE, A.V.; MEL'NIKOV, N.V.;
KHOVSTOV, V.M.; ROMASHKIN, P.S.; ABDULLAYEV, Kh.M.; DADYKIN, V.P.,
doktor biol.nauk; BOLENTSEV, R.D., doktor khim.nauk; PONOMAREV,
B.N.; BLAGONRAVOV, A.A., akademik; ARTSIMOVICH, L.A., akademik;
KOSTENKO, M.P., akademik; NALIVKIN, D.V., akademik

Discussion of the report. Vest.AN SSSR 31 no.3:27-47 Mr '61.
(MIRA 14:3)

1. AN Kazakhskoy SSSR (for Satpayev). 2. Chleny-korrespondenty
AN SSSR (for Bitsadze, Mel'nikov, Khvostov, Romashkin, Abdullayev,
Ponomarev).

(Research)

KONSTANTINOV, B.P.; DEBORIN, A.M., akademik; PEYVE, Ya.V.; IOFFE, A.F., akademik; MIKHAYLOV, A.I., prof.; SATPAYEV, K.I., akademik; ZHUKOV, Ye.M., akademik; LAVRENT'YEV, M.A., akademik; SEMENOV, N.N., akademik; PAVLOVSKIY, Ye.N., akademik; MINTS, I.I., akademik; SISAKYAN, N.M.; ROMASHKIN, P.S.; FEDOROV, Ye.K.; STECHKIN, B.S., akademik; MAYSKIY, I.M., akademik; PAVLOV, Todor, akademik; ARBUZOV, A.Ye., akademik; VASIL'YEV, N.V., doktor ekon.nauk; BELOUSOV, V.V.; MITIN, M.B., akademik; BLAGONRAVOV, A.A., akademik; KANTOROVICH, L.V.; RYBAKOV, B.A., akademik; NEMCHINOV, V.S., akademik

Discussion of the address. Vest. AN SSSR 29 no.4:34-63 Ap '59.
(MIRA 12:5)

1. Chlen-korrespondent AN SSSR (for Konstantinov, Peyve, Sisakyan, Romashkin, Fedorov, Belousov, Kantorovich).
(Science)

ACC NR: AT7003185

(N)

SOURCE CODE: UR/2536/66/000/067/0065/0078

AUTHORS: Nikitina, M. F. (Candidate of technical sciences); Fadeyeva, G. N. (Engineer); Romashin, V. M. (Engineer)

ORG: none

TITLE: Oxidation kinetics of aluminum-magnesium alloys. Mechanism of formation of oxide film on aluminum-magnesium alloys

SOURCE: Moscow. Aviatsionnyy tekhnologicheskiiy institut. Trudy, no. 67, 1966. Voprosy proizvodstva otlivok iz alyuminiyevykh splavov (Problems of producing aluminum alloy castings), 65-78

TOPIC TAGS: aluminum base alloy, magnesium containing alloy, oxide formation, oxidation kinetics

ABSTRACT: Oxidation kinetics of Al-Mg alloys as a function of time and temperature of oxidation was investigated. Composition of the oxide film on alloys containing 8.5, 9.5, 10.5, and 11.5% Mg was determined by x-ray diffraction analysis and was found to consist mainly of $MgAl_2O_4$, with some MgO and Al_2O_3 . The alloys were investigated in a nonmodified state and in a state modified by the addition of 0.1--0.15% (by weight) of Zr, Zr + Nb, and Zr + Mo. The time dependence of the oxidation kinetics was studied gravimetrically at 435, 485, and 610C for 900 to 54 000 seconds.

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UDC: 669.017:669.71.721

ACC NR: AT7003185

The curves of the weight increase vs time are generally parabolic. An increase of Mg content enhances the oxidation process while the additives inhibit it, apparently due to an increased density and mechanical strength of the alloy. An exception is noted in the shape of curves at 610C. These are linear and produce the empirical equation for the oxidation of all investigated alloys:

$$W^n = kt,$$

where W - relative weight increase of the specimen in g/cm², k - rate constant for the oxidation, τ - time in seconds, n - exponent. Effect of the temperature upon the oxidation kinetics is summarized in Fig. 1. It is found that the reaction is subject to Arrhenius' equation, and the activation energies are calculated for different alloys.

Card 2/3

ACC NR: AT7003185

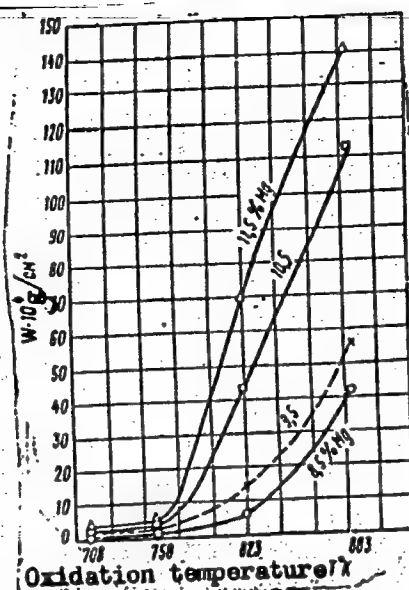


Fig. 1. Kinetics of oxidation of nonmodified aluminum-magnesium alloys. $\tau = 3600$ sec - const. Relative weight increase $W \times 10^4$ g/cm²

Orig. art. has: 4 tables, 14 figures, and 3 equations.

SUB CODE: 11/

SUBM DATE: none/

ORIG REF: 001/

OTH REF: 003

Card 3/3

STURMAN, A.V., veter. vrach (Strashenskiy rayon, Moldavskaya SSR); BULGAKOV, Yu.N., veter. fel'dsher (Strashenskiy rayon, Moldavskaya SSR); KAL'NITSKIY, P.I., veter. vrach (Strashenskiy rayon, Moldavskaya SSR); OCHAKOVSKIY, Z.M., veter. vrach (Strashenskiy rayon, Moldavskaya SSR); GOTSENOGA, A.D. (Strashenskiy rayon, Moldavskoy SSR); ABRAM-YAN, G.I., veter. vrach; MEKHTIYEV, M.G., veter. fel'dsher (s. Shi-rozlu, Vedinskogo rayona Armyanskoy SSR); KIRAKOSYAN, A.A., veter. vrach; GEORGIYEV, Yu.P., veter. vrach; LOMAKIN, A.M., nauchnyy so-trudnik; SHEPELEV, L.A., veter. vrach.; TARASOV, I.I., assistant; ROMASHKIN, V.M., veter. tekhnik; ANDRIYAN, Ye.A.; BARTENEV, V.S.; KOROL', Ye.I., veter. tekhnik; YEROSHENKO, A.K., aspirant; BANZEN, Ya.P.; SARAYKIN, I.M., prof.; ZHEVAGIN, A.N., veter. vrach; BUT'-YANOV, D.D., veter. vrach (Klimovichskiy rayon, Mogilevskoy oblas-ti BSSR); SHALYGIN, B.V., veter. vrach (Klimovichskiy rayon, Mogi-levskoy oblasti, BSSR); RYABOKON, G.T., veter. fel'dsher; MOVSUM-ZADE, K.K., prof.; DUGIN, G.L., aspirant; TITOV, G.I., nauchnyy sotrudnik; MEDVEDEV, I.G., veter. vrach.; ALIKAYEV, V.A.; ALLENOV, O.A., veter. vrach.

Prophylaxis and treatment of noninfectious diseases in calves and piglets. Veterinariia 40 no.2:40-47 F '63. (MIRA 17:2)

1. Ul'yanovskaya oblastnaya veterinarno-bakteriologicheskaya labo-ratoriya (for Sturman). 2. Kolkhoz imeni Kirova. Volokonovskogo
(Continued on next card)

ROMASHKIN, V.N., Inzh.; YABUTIN, V.K., Inzh.

Practices in building a coal preparation plant in the Kuznetsk Basin.
From. stroi. 42 no.10:11-15 O '64. (MIRA 17:11)

1. Trast Len'nskenakhtostroy.

ROMASHKIN, V.V.

Organizational work determines success. Bezop.truda v prom. 3
no.5:28 My '59. (MIEA 12:8)

1. Gosgortekhnadzor UzSSR.
(Oil fields--Safety measures)

ROMASHKIN, V.V.

Some methods of safety work in oil fields. Bezop.truda v prom.
6 no.6:28-29 Je '62. (MIRA 15:11)

1. Gornotekhnicheskii inspektor Ferganskoy rayonnoy gornotekhnicheskoy inspeksii Gosudarstvennogo komiteta pri Sovete Ministrov Uzbekskoy SSR po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.

(Oil fields--Safety measures)

(Classification)

Report of diffusion of isotopically deformable metals. Part 1;
Review of literature. Fiz. tver. tela 3 no. 1:30-50 1960.
(Sov. 14:1)

1. Fiziko-khimicheskiy Institut Ak. 1967.
(Division)

18-7500

31855
S/032/62/028/001/013/017
B116/B108

AUTHORS: Romashkin, Yu. P., and Shestopalov, L. M.
TITLE: Pressure tests at constant load and study of diffusion during creep

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 1, 1962, 95 - 97

TEXT: A procedure was worked out for measuring the diffusion coefficient D in samples deformed by pressure during diffusion annealing. A relationship between σ and $\dot{\epsilon}$ (mean deformation rate during the test) at 400 - 900°C was derived for M-1 (M-1) copper. The rate at which silver at 800°C diffused into plastically deformed copper (0 - 1200% per hour) was measured. Within limits of error, diffusion was not accelerated. This indicates that the acceleration of diffusion decreases sharply with increasing temperature. The machine designed by the authors permits (1) deforming the sample in vacuo as much as possible at increased temperature; (2) varying the load on the sample over a wide range, and keeping the load constant during deformation; and (3) varying the deformation rate over a wide range. The furnace operates with a sufficiently high vacuum

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S/032/62/028/001/013/017
B116/B108

Pressure tests at constant load...

(10^{-3} mm Hg). For greater convenience of measuring D, one side face of the cylindrical samples was cut plane ($r = 2.5 - 5$ mm, $h = 5$ mm). The samples were annealed (grain size 3 mm) for 2 hrs at 800°C and for 3 hrs at 950°C , and were then chemically polished. A thin silver layer

($10^{-5} - 10^{-6}$ mm) containing the Ag^{110} radioisotope was then applied to the side face of the sample. The samples were heated, and loaded in a vacuum. The furnace was turned off after a 50% deformation was reached. For determining D, layers were taken from the cooled sample, and the β - and γ -intensities were determined. In this way, the relationship between σ and $\dot{\epsilon}$ was obtained (Fig. 3). The concentration distribution of the silver diffusing into the copper at 800°C was measured, and D was calculated from the curves obtained (Table). There are 4 figures, 1 table, and 2 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences USSR)

Card 2/42

ROMASHKIN, Yu.P.; SHESTOPALOV, L.M.

Methods for compression tests under constant stress with the
study of diffusion in the process of creep. Zav.lab. 28
no.1:95-97 '62. (MIRA 15:2)

1. Fiziko-tehnicheskiy institut im. A.F.Ioffe AN SSSR.
(Creep of metals)

S/659/62/008/000/001/028
I048/I248

AUTHOR: Romashkin, Yu.P.

TITLE: A study of structural changes in deformed copper, using the diffusion method

SOURCE: Akademiya nauk SSSR. Institut metallurgii, Issledovaniya po zharoprochnym splavam. v.8. 1962. 21-27

TEXT: An attempt was made to learn the properties and behavior of grain boundaries in Cu by studying the grain boundary diffusion of radioactive Ag during deformation. The distribution of Ag was measured at 600°C; the coefficient of grain boundary diffusion in fine-grain specimens (initial grain size 0.03 mm.) decreased considerably after deformation (rate of deformation 250-750%/hr.; degree of deformation 50%). The grain size after the deformation was practically independent of the initial grain size, within the range 0.03-3.0 mm., i.e., the initial Cu structure was unstable under the experimental conditions. The rate of grain-boundary diffusion

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S/659/62/008/000/001/028
I048/I248

A study of structural changes...

was either constant or decreased during the deformation process; this is attributed to the increased rate of volume diffusion. Interrupted deformation, with intermediate stages of holding at the deformation temperature in the unloaded state, caused the formation of finer grains, with fewer structural defects; it is assumed that new grain boundaries are created during each consecutive deformation stage. There are 4 figures and 1 table.

Card 2/2

ACHSEN, V.P.

Study of diffusion of plastic deformable metals. Part 2:
General functional correlation. Fiz. tver. tela 3 no. 12:1695-
1701, 1961. (NII 14:2)

1. Fiziko-tekhnicheskii institut AN SSSR, Leningrad.
(Diffusion)

ROMASHKIN, Yu.P.

Considering the unsteady character of creep in determining the activation characteristics of deformation. Issl. po zharoproch. splav. 10: 31-38 '63. (MIRA 17:2)

SHESTOPALOV, L.M.; ROMASHKIN, Yu.P.

Diffusion of silver into plastically deformable copper. Fiz. tver.
tela 2 no. 12:2998-3008 D '60. (MIRA 14:2)

1. Fiziko-tekhnicheskiy institut AN SSSR, Leningrad.
(Diffusion) (Silver) (Copper)

ROMASHKIN, Yu.P.; SHESTOPALOV, L.M.

Studying the diffusion along the boundaries appearing in creep of copper. Fiz. tver. tela 3 no. 12:3029-3039 D '60. (MIRA 14:4)

1. Fiziko-tekhnicheskiy institut AN SSSR, Leningrad.
(Diffusion) (Copper) (Creep of metals)

ROGLASHKIN, Yu.P.

Theory of diffusion in the plastic deformation of metals.
Part 3: Possible nature of the phenomenon. Fiz. tver. tela
3 no. 1.:3065-3076 D '60. (UIMA 14:2)

1. Fiziko-tekhnicheskiy institut AN SSSR, Leningrad.
(Diffusion) (Deformations (Mechanics))

AUTHOR: Romashkin, Yu. P.

SOV/126-7-6-3/24

TITLE: On the Problem of Determination of the Diffusion Constant in Plastic Deformation of a Solid

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 7, Nr 6, pp 825-831 (USSR)

ABSTRACT: In allowing for the effect of uniaxial plastic deformation (e.g. creep) on the linear diffusion constant, measured by the method of successive layer removal, it is necessary to take into account both the change in the atomic mechanism of diffusion (the physical factor) and the effect of the change of geometry of the sample (the geometrical factor). The present paper discusses the effect of the geometrical factor in the case of linear diffusion. Formulae are given for the calculation of a correction factor $a = D_1/D$, where D_1 is the measured and D is the true diffusion constant. These formulae apply for an arbitrary dependence of plastic deformation on time. The paper is entirely theoretical. Acknowledgments are made to L. M. Shestopalov and Ya. S. Uflyand for their advice.

Card 1/2

SOV/126-7-6-3/24

On the Problem of Determination of the Diffusion Constant in
Plastic Deformation of a Solid

There are 5 references, 3 of which are Soviet and 2 English.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR
(Physico-technical Institute, Ac.Sc., USSR)

SUBMITTED: February 11, 1957

Card 2/2

87912

S/181/60/002/012/012/018
B006/B063

10 9210
18.8200

AUTHOR: Romashkin, Yu. P.

TITLE: Theory of Diffusion in Plastic Deformation of Metals. III.
The Possible Nature of This Phenomenon

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 12, pp. 3065-3076

TEXT: Part I of the present article was a review of publications, and Part II presented a formulation of the most important relations of diffusion acceleration D/D_0 with σ , $\dot{\epsilon}$, ϵ , T and τ , which resulted in the relation $D/D_0 = 1 + K\sigma\tau \exp[(Q_0 - Q_{pl})/RT] [1 - \exp(-\epsilon_{max}/\tau\dot{\epsilon})]$, where D/D_0 is the relative increase of the diffusion coefficient; σ is the voltage applied to the specimen; $\dot{\epsilon}$ is the deformation rate for given σ and T ; ϵ_{max} is the limiting deformation; τ is the lifetime of defects occurring in deformation; Q_0 is the diffusion activation energy of the undeformed metal; Q_{pl} is the activation energy of the motion of defects resulting

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87912
Theory of Diffusion in Plastic Deformation of
Metals. III. The Possible Nature of This
Phenomenon

S/181/60/002/012/012/018
B006/B063

from deformation; and K is a constant. Basing on this relation, the author has studied the nature of diffusion acceleration, first by the method of formal analogy, i.e., the thermodynamic correspondence of the creeping and diffusion effects, and then on the basis of structural relations. The following conclusions have been reached: Supposing that diffusion and creeping in metals are steady and irreversible, the rate of these processes may be given by a function of the type

$$\dot{\eta}(T, \xi) \sim \exp \left[\frac{\Delta S_0 + \varphi(\xi)}{R} \right] \exp \left[- \frac{\Delta U_0 + \psi(\xi)}{RT} \right],$$

where $\dot{\eta}$ denotes the rate of the process; ξ is a perturbation factor (concentration of a dissolved element or tension); ΔU_0 and ΔS_0 are activation energy and entropy, respectively; $\varphi(\xi)$ and $\psi(\xi)$ are functions that characterize the variations in activation energy and entropy, respectively. According to K. A. Osipov's hypothesis, the nature of activated states in such different processes as creeping and diffusion is the same. An estimate made for diffusion acceleration according to this hypothesis and the relation for $\dot{\eta}(\xi, T)$ gave values that agreed well with experimental

Card 2/3

18.8200
10 9210

S/181/60/002/012/011/018
B006/B063

AUTHOR: Romashkin, Yu. P.

TITLE: Theory of Diffusion in Plastically Deformed Metals. II.
General Functional Relations

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 12, pp. 3059-3064

TEXT: Part I of the present article has shown that all experimental studies on diffusion in plastically deformed metals were somehow erroneous or inaccurate so that they cannot be used as a basis for a theory of this phenomenon. The only exception is a publication (Ref. 2) in which a considerable diffusion acceleration in plastically deformed metals is mentioned. The author has made an attempt to formulate the most important relations between diffusion acceleration D/D_0 , external (σ, T) and internal deformation parameters (activation energy, defect lifetime), ε and $\dot{\varepsilon}$:

$D/D_0 = 1 + K_0 \sigma \dot{\varepsilon} \tau \left[1 - \exp\left(-\frac{\varepsilon_{\max}}{\tau \dot{\varepsilon}}\right) \right]$; τ is the time within which the number of defects drops to the e -th part; σ symbolizes the stress; $D/D_0 = 1$

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Theory of Diffusion in Plastically Deformed Metals. II. General Functional Relations

S/161/60/002/012/011/018
B006/B063

+ $K \exp((Q_0 - Q_{pl})/RT) (1 - \exp(-\epsilon_{max}/\tau \dot{\epsilon}))$, where $K = D_{pl}^0 / \mu D_0^0$; Q_0 is the energy of intrinsic diffusion for $\sigma = 0$; Q_{pl} is the activation energy of diffusion of defects occurring in plastic deformation. Analysis of the first-mentioned equation for $T = 0$ makes it possible to establish conditions for a dependence of D/D_0 on deformation rate, stress, and degree of deformation. It was shown that the dependence of the diffusion acceleration on deformation at constant $\dot{\epsilon}$ (Ref. 2) is due to the deformation dependence of the relaxation time of the effect. The magnitude of the effect depends chiefly on temperature. L. M. Shestopalov is thanked for reading the manuscript and for comments. The work was carried out in N. N. Davidenkov's laboratory at FTI AS USSR. There are 5 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR Leningrad (Institute of Physics and Technology of the AS USSR, Leningrad)

SUBMITTED: April 28, 1960

Card 2/2

87910

S/191/60/002/012/010/018
B006/B063

18.7500

AUTHOR: Romashkin, Yu. P.

TITLE: Theory of Diffusion in Plastically Deformed Metals. I. Review of Publications

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 12, pp. 3050-3058

TEXT: This is a review of theoretical and experimental studies on diffusion in plastically deformed metals. First, a detailed description is given of the results of Buffington and Cohen (Ref. 2, 1952) who studied intrinsic diffusion in compressed iron at elevated temperatures with the aid of the K-radiation of Fe^{55} . Studies of S. Z. Bokshetyn et al. presented an experimental proof of diffusion acceleration in compression. I. Ya. Dekhtyar and V. S. Mikhalenkov studied diffusion at very low deformation rates ($\dot{\epsilon}$) and $\dot{\epsilon} = 1\%$; they found that the diffusion rate increased by a factor of up to ten. Lee and Maddin found even a hundredfold increase of intrinsic diffusion in silver crystals for $\dot{\epsilon} = 10^{-5}-10^{-4}$ sec, $\epsilon = 90\%$ and $700-800^{\circ}C$. Several American publications are referred to, and the results of the most important papers are summarized in a table. All papers were

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87210
Theory of Diffusion in Plastically Deformed Metals. S/181/60/002/0:2/010/018
I. Review of Publications B006/B063

somehow incorrect or inaccurate. The present work was carried out at the laboratory of FTI AS USSR under the guidance of N. N. Davidenkov. There are 3 figures, 2 tables, and 18 references: 8 Soviet, 7 US, 2 British, and 1 French.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Institute of Physics and Technology of the Academy of Sciences USSR)

SUBMITTED: April 28, 1960

Card 2/2

18.8200
10.9210

87907

S/181/60/002/012/007/016
B006/B063

AUTHORS: Romashkin, Yu. P. and Shestopalov, L. M.
TITLE: Study of Diffusion on Boundaries Appearing in Creeping of Copper
PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 12, pp. 3029-3039

TEXT: The present paper is a very detailed report on a study of diffusion in creeping tests. The following results were obtained: 1. Compression creeping tests (with $\sigma = \text{const}$) up to a deformation of $\epsilon = 50\%$ between 400 and 900°C and variation of the deformation rate ($0 \leq \dot{\epsilon} \leq 2000\%/ \text{hour}$) have shown that the creeping rate increases quickly after a critical deformation ϵ_{cr} has been surpassed. 2. Qualitative microscopic examinations have shown that a new system of grain boundaries is formed in the material during deformation. The extension of these boundaries and ϵ_{cr} depend on the deformation temperature (with $\dot{\epsilon} = \text{const}$, $\dot{\epsilon} = \text{const}$) in almost the same manner. From this, it is concluded that the desorientation of grains during deformation and the creeping rate increase

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87907

Study of Diffusion on Boundaries Appearing in
Creeping of Copper

S/181/60/002/012/007/018
B006/B063

considerably. To check this assumption, diffusion experiments were made with silver, and the grain size and desorientation were determined by removal of layers and by evaluating the curves according to Fisher. Diffusion experiments carried out at 600°C with specimens previously deformed at different temperatures up to $\epsilon = 50\%$ and $\dot{\epsilon} = \text{const}$ showed that such a material exhibits grains that are finer than the initial ones. The extension of the initial grain boundaries decreases with a rise in temperature of the previous deformation to the same extent as ϵ_{cr} . The degree of desorientation of these grains is independent of the deformation temperature. Diffusion experiments performed at 600°C with specimens previously deformed at 600°C up to ϵ -values of 2-50% showed that the grain size is almost independent of ϵ while their desorientation increases considerably with ϵ . Diffusion experiments carried out at 600°C with specimens which had been deformed simultaneously at $\sigma = \text{const}$ in different degrees, showed that also in this case the grain size depended only slightly on ϵ . For these experiments it could not be assumed that the volume diffusion rate remains constant. However, the results indicated that D_{vol} increases with ϵ ; the increase of D_{vol} agreed with the value

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87907

Study of Diffusion on Boundaries Appearing in Creeping of Copper S/81/60/002/012/007/018
B006/B063

obtained in previous experiments (Ref. 9). All experiments have shown that deformation creates new grains in the material, the size of which depends only slightly on ϵ while their desorientation increases quickly with ϵ . D_{vol} increases if $\epsilon \geq \epsilon_{cr}$. At an angle of desorientation corresponding to ϵ_{cr} , the nature of interaction between intragranular defects and grain boundaries changes such that the mean defect density in the grain increases. This fact is held responsible for the quick increase of the creeping rate and for the increase of the volume diffusion rate with $\epsilon \geq \epsilon_{cr}$. There are 8 figures and 9 references: 2 Soviet, 2 French, 3 US, and 2^{cr} British. X

ASSOCIATION: Fiziko-tekhnicheskii Institut AN SSSR, Leningrad (Institute of Physics and Technology AS USSR, Leningrad)

SUBMITTED: April 27, 1960

Card 3/3

87903

18 7560

1555

S/181/60/002/012/002/C15
B006/B063

AUTHORS: Shestopalov, L. M. and Romashkin, Yu. P.

TITLE: Diffusion of Silver in Plastically Deformed Copper

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 12, pp. 2998-1308

TEXT: This is a report on measurements of the volume diffusion rate for coarse-grained, plastically deformed copper of the type M-1 (M-1). Ag¹¹⁰ with a specific activity of about 100 mC/g was used as diffusing substance, and two methods were applied: 1. removal of layers with nitric, ortho-phosphoric, and glacial acetic acids; 2. diffusion absorption by the use of gamma and beta rays. The copper specimens were cylinders 5 mm high and 5-8 mm in diameter, which were subjected to heat treatment in a vacuum of 10^{-3} - 10^{-4} mm Hg, deformed at 600°C with a special machine under constant compression, and finally cooled. The change of the creeping rate during deformation from 0 to 2000% per hour at 600°C, which was applied to obtain a 50% deformation, caused a change of the diffusion coefficient. The diffusion coefficient, D, of silver was found to increase linearly: X

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87903

Diffusion of Silver in Plastically
Deformed Copper

S/181/60/002/012/002/018
B006/B063

$D/D_0 = 1 + K\dot{\epsilon}$, $\dot{\epsilon}$ is the deformation rate; $K = 1.1 \cdot 10^3$ if $\dot{\epsilon}$ is expressed in percent, and $4 \cdot 10^3$ if $\dot{\epsilon}$ is expressed in sec^{-1} . The determination of D/D_0 has an error of 50-70%, as was shown by measurement of the beta and gamma activities of Ag^{110} with an end-window counter of the type MCT-17(MST-17). The intensity ratio i_β/i_γ was found to be 12.2. The measured values are spread on either side of the straight line representing D/D_0 as a function of $\dot{\epsilon}$. The spread is, however, within the limits of accuracy. It was shown that for a given deformation rate, the increase of the diffusion rate decreases with a decrease of deformation. There are 9 figures and 6 references: 5 Soviet and 1 US. X

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR Leningrad (Institute of Physics and Technology of the AS USSR, Leningrad)

SUBMITTED: April 5, 1960

Card 2/2

SOV/137-59-1-1117

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 152 (USSR)

AUTHOR: Romashkin, Yu. P.

TITLE: On the Article by S. A. Dovnar: "Calculation of the Rate of Diffusion in a Body Undergoing Plastic Deformation". (Letter to the Editor)
[O stat'ye Dovernara, S. A. "Vychisleniye skorosti diffuzii v plasti-cheski deformiruyemom tele". (Pis'mo v redaktsiyu)]

PERIODICAL: Sb. nauchn. tr. Fiz-tekhn. in-t AN BSSR, 1958, Nr 4, pp 256-257

ABSTRACT: The author examines errors committed by S. A. Dovnar (RZhMet, 1956, Nr 3, abstract 2492) in his approximate solution of the problem of diffusion accompanied by plastic deformation at a constant rate. The author shows that the equation: $Ddc/dx = D_0 dc_0 / dx_0$ written by Dovnar on the basis of Fick's first law is not observed, whereas the equation $Ddc/dx = D_0 \exp(-2\epsilon) - dc/dx + Cd\epsilon/dt$ is correct and from the design formula $D = \exp[-2(\epsilon_{max} - \epsilon_{mean})] / 4t \tan \alpha$ can be obtained which is sufficiently precise for deformations of up to 50%.
V. G.

Card 1/1

ROMASHKINA, Aleksandra Fedorovna; DONSKOV, V.Ye., prof.,
retserezent; FERCHOVSKIY, A.Ye., ekonomist, retserezent;
PGNOMAREVA, I.A., kandyd. ekon. nauk, spets. red.; FUKS,
V.K., red.

[Potentialities for an increase in labor productivity in
the confectionary industry] Rezervy rosta proizvoditel'-
nosti truda v konditerskoi promyshlennosti. Moskva, Pi-
shchevaya promyshlennost', 1966. 213 p. (MIRA 18:10)

L 38303-65 EWT(1)/EWG(v)/FCC/EEC(t) Po-4/Pe-5/Pq-4/Pt-10/Pi-4 GW
 ACCESSION NR: AR5003329 S/0081/64/000/021/E046/E046

42
B

SOURCE: Ref. zh. Khimiya, Abs. 21E123

AUTHOR: Gushchin, G. P.; Romanova, R. G.; Romashkina, K. I.

TITLE: Analysis of ozone from an airplane

CITED SOURCE: Sb. Materialy konferentsiy po itogam MGG (1960) i meterol. izuch. Antarktidy (1959). M., Gidrometeoizdat, 1961, 183-186

TOPIC TAGS: ozone concentration, atmospheric ozone, atmospheric temperature, atmospheric pressure, jet stream, aviation meteorology

TRANSLATION: The authors report the results of the measurement of the total content of atmospheric ozone during 2 flights over the territory of the SSSR in the fall of 1959. The flight in August-September was over the route Leningrad-Odessa-Tashkent-Aktyubinsk-Volgograd-Leningrad, while the flight in September-October followed the route Leningrad-Odessa-Mineral'nyye Vody-Tashkent-Aktyubinsk-Kazan'-Leningrad. The flights were carried out at altitudes of 3 and 2.1 km. After processing the data of the flights, the authors obtained curves showing the total

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ACCESSION NR: AR5003329

ozone content along the route. The total ozone content during the flights fluctuated considerably, the fluctuations exceeding the experimental error. As the axis of the jet stream was bisected, there was a sharp increase in the ozone content amounting to almost 30%. A brief analysis of the pressure conditions at the 300 and 200 mb levels is given, together with graphs of the total ozone content. It is pointed out that a sharp change in the total ozone content in the area of the jet stream was previously observed by the authors in other areas during measurements from an airplane. In order to study the relationship between the total ozone content and the air temperature at the height of the flight, curves were constructed showing the ozone content and air temperature. These curves are interrelated and show a reciprocal course. The authors conclude that there is a significant increase in the horizontal gradient of the total ozone content in the areas of the jet stream in the spring and fall. G. Gushchin.

SUB CODE: ES, SV

ENCL: 00

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2/2

ACCESSION NR: AT4043155

S/2531/64/000/154/0030/0035

AUTHOR: Romashkina, K. I.

TITLE: Some relationships between the total ozone content and aerological parameters at Alma-Ata

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 154. Voprosy* fiziki atmosfery* (Problems in atmospheric physics), 30-35

TOPIC TAGS: meteorology, aerology, ozone, troposphere, stratosphere, wind direction, atmospheric physics, temperature

ABSTRACT: The author reports the results of computations of the correlation coefficients between the total ozone content and temperature and also the meridional and zonal components of the wind at various heights for four seasons of the year on the basis of ozonometric and radiosonde observations at Alma-Ata in 1961. For computing the correlation coefficient, the year was broken down into four seasons of two months each. The coefficients were computed for heights of 3, 6, 9, 12, 15 and 20 km. These correlation coefficients also were computed for these heights for the entire year. The results are shown in Fig. 1 of the Enclosure. Curve 1 shows the change in the ozone-temperature correlation coefficient for the entire year. This coefficient is negative for heights of 3, 6, 9, and 12 km

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ACCESSION NR: AT4043155

and has an absolute value greater than 0.5. Between 12 and 15 km it passes through zero and becomes positive at heights of 15 and 20 km, but not much smaller in absolute value. The same correlation coefficient for Alma-Ata obtained by Bezverkhniy (Tr. KazNIGMI, No. 5, 1955) is also shown (curve 2) for comparison. There is little resemblance. The author attributes this to the limited data and faulty methods used in the earlier study. The height at which there is a change in sign of the correlation coefficient at Alma-Ata is dependent on the season, being between 9 and 12 km in winter, between 12 and 15 km in summer and autumn and between 15 and 20 km in spring. The author also computed the correlation coefficient between total ozone content and meridional and zonal wind components at heights of 9 and 15 km. It was found that there is no definite relationship between total ozone content and wind direction. In general, for the Alma-Ata area, as for a number of regions in the SSSR, there is a characteristically high negative (about -0.65) correlation coefficient for the troposphere and a positive (about 0.40) correlation coefficient in the stratosphere. The minimum correlation coefficient, computed for the entire year, and the change in sign, are observed at a height between 12 and 15 km. Orig. art. has: 1 figure and 2 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

Card

2/4

ACCESSION NR: AT4043155

SUBMITTED: 00

DATE: 28-11-74

ENCL: 01

SUB CODE: ES

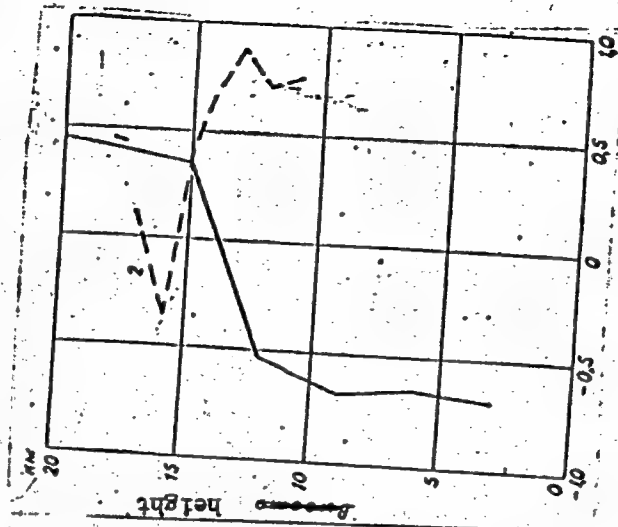
NO REF SOV: 012

OTHER: 004

Card 3/4

ACCESSION NR: AT4043155

ENCLOSURE: 01



Correlation coefficient r between total ozone content and temperature at different heights in the atmosphere at Alma-Ata. 1 - based on computations for 1961 in this study; 2 - based on computations for 1953-1954 by Bezverkhny.

Card

ROMASHKINA, L.

"Woodpulp paper industry in the seven-year plan". NTO 3 no.2:62-63
F '61. (MIRA 14:3)
(Moscow--Exhibitions) (Paper industry)

ROMASHKINA, L.P.

Effect of mineral fertilizers on the accumulation of santonin
and yield of Artemisia. Dokl. AN Azerb. SSR 16 no. 6:593-596
'60. (MIRA 13:10)

1. Institut botaniki AN Azerbaydzhanskoy SSR. Predstavleno
akademikom AN Azerbaydzhanskoy SSR V.R. Volubuyevym.
(Artemisia--Fertilizers and manures)
(Santonin)

ROMASHINA, N.F.

NIKIFOROV, Yu.N.; ROMASHINA, N.F.; KIRAKOSYAN, A.K.

Experience using glued girders. Put' i put. khoz. no.7:9 JI '57.
(Girders) (MIRA 10:8)

VITEL'S, L.A.; ROMASHKINA, S.B.

Inertial connection between winter and spring atmospheric
temperature anomalies in the European part of the U.S.S.R.
Trudy GGO no.148:38-58 '63. (MIRA 16:6)
(Atmospheric temperature)

AKIMOVA, G.Yu.; LIASHKO, V.D.; ROMASHKINA, Ye.V.; CHESNOKOVA, R.F.

Lesions of the oral cavity in secondary and tertiary syphilis.
Vest.derm.i ven. 34 no.3:59-61 My-Je '60. (MIRA 13:10)

(SYPHILIS) (MOUTH—DISEASES)

KOCHNOVA, I.Ye., prof.; ROMASHKINA, Z.S.; YABLOKOVA, T.B., kand. med. nauk; KOZHEVNIKOVA, T.P.

Diagnostic value of the tuberculin "mark" in the examination of adults for tuberculosis. Sov. med. 26 no.4:82-86 (MIRA 17:2) Ap '63.

1. Iz kafedry tuberkuleza (zav. - prof. I.Ye. Kochnova) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova i Kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni L.A. Tarasevicha.

ROMASHKAN, N."

Treating hyperthyroid goiter with radioactive iodine (I^{131}).
Vrach, delo no. 5:501-503 My'58 (MIRA 11:7)

1. Kiyevskiy gorodskoy protivozobnyy dispanser (nauchnyy rukovoditel'
-zasl. deyatel' nauki, prof. A.K. Gorchakov).
(GOITER)
(IODINE--THERAPEUTIC USE)

ROMASHKIN, N. V.
ROMASHKIN, N.V.

Use of I^{131} in diagnosing the hyperthyroid form of goiter. Vrach.
delo no.10:1037-1041 O '57. (MIRA 10:12)

1. Kiyevskiy gorodskoy protivozobnyy dispanser (glavnyy vrach -
N.Yu.Yezerskaya, nauchnyy rukovoditel' - zasl. deyatel' nauki,
prof. A.K.Gorchakov)
(IODINE--ISOTOPES) (GOITER)

ROMASHIN, P

5

VOYENNOE PRESTUPLENIIA SPETSIALISTA (MILITARY OFFENSES OF SPECIALIST)
MOSKVA, VOENVEZDAT, 1953.

439 P.

BIBLIOGRAPHICAL FOOTNOTES:

SO: N/5
117.44
.R7

ROMASHKIN, Yu. P.

"Calculation of the Rate of Diffusion in a Body Undergoing Plastic Deformation"

Сборник научных трудов, т. IV, Минск, Изд-во АН БССР, 1978, 201 с.

~~ROMASHKIN, Yu. P., aspirant~~

On S. A. Dovnar's article "Calculating diffusion velocity in bodies subjected to plastic deformations". Sbor. nauch. trud. Fiz.-tekh. inst. AN BSSR no. 4:256-257 '58. (MIRA 11:11)

1. Leningradskiy fiziko-tekhnicheskii institut AN SSSR.
(Deformations (Mechanics))

ROMASHKO, A. ; GARKAVENKO, G.

Construction of houses from keramzit-concrete slabs. Na stroi.
Ros. 3 no.9:31-33 S '62. (MIRA 15:12)

1. Glavnyy inzh. Moskovskogo stroitel'nogo upravleniya
Glavstroya (for Romashko). 2. Nachal'nik tekhnicheskogo otdela
Moskovskogo stroitel'nogo upravleniya Glavstroya (for Garkavenko).
(Moscow—Apartment houses)
(Precast concrete construction)

L 45239-66 TCH

ACC NR: AN6010485

SOURCE CODE: UR/9008/65/000/289/0003/0003

AUTHOR: Romashko, A. (Engineer, Colonel, Chief of the Moscow Military Construction Directorate)

2/
B

ORG: none

TITLE: Construction of apartment houses and cultural facilities in Moscow by military construction organizations

SOURCE: Krasnaya zvezda, 09 Dec 65, p. 3, col. 1-4

TOPIC TAGS: general construction, construction machinery, crane, military engineering

ABSTRACT: The article deals with the construction of apartment houses and cultural facilities in Moscow by military builders. Until 1965, military organizations constructed five-story buildings only. In the beginning of 1965, they began to build 8-, 12-, and even 16-story apartment houses as well as cultural and welfare facilities. Shortcomings and difficulties facing the military builders in

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L 45239-66

ACC NR: AN6010485

construction of 8—16-story buildings due to lack of cranes (BK-160 type) and other equipment are discussed. The article is illustrated by a picture showing 12-story apartment houses along Tukhachevskiy street in Moscow under construction by the military builders. Orig. art. has: 1 figure. [NT]

SUB CODE: 13/ SUBM DATEL none/

Card 2/2 LC

ROMASHKO, Aleksandr Ivanovich; GARKAVENKO, Georgiy Lukich;
POLUBNEVA, V.I., inzh., red.

[Buildings of large keramzit concrete panels; practices
of the Moscow Construction Administration and the Com-
bine for Reinforced Concrete Construction of the Main
Construction Administration] Dom iz ukрупnennykh keram-
zitobetonnykh panelei; opyt Moskovskogo stroitel'nogo
upravleniia i Kombinata zhelezobetonnykh konstruktsii
Glavstroia. Moskva, Gosstroizdat, 1963. 30 p.

(MIRA 17:9)

1. Moscow. Nauchno-issledovatel'skiy institut organizatsii,
mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.

ROMASHKO, D.A.

Our attention is focused on safety engineering problems. Elek.
i tepl.tiaga 7 no.2:14-15 F '63. (MIRA 16:2)

1. Zamestitel' nachal'nika sluzhby elektrifikatsii i energetiche-
skogo khozyaystva Zapadno-Sibirskoy dorogi.
(Electric railroads--Safety measures)

ROMASHKO, D.A.

Leading electrification workers of Western Siberia. Elek.i
tepl.tiaga 5 no.9:22 S '61. (MIRA 14:10)

1. Zamestitel' nachal'nika sluzhby elektrifikatsii i
energeticheskogo khozyaystva Zapadno-Sibirskoy dorogi.
(Siberia, Western--Electrification)

AYZEN, B.G., inzh.; ROMASHKO, I.Ye., inzh.

Technical and economic comparative analysis of regenerative
and tubular air preheaters. Energomashinostroenie 11
no.11:36-40 N '65. (MIRA 18:11)

ROMASHOV, D.D.; NIKOLYUKIN, N.I.; BELYAYEVA, V.N.; TIMOFEYeva, N.A.

Possibility of obtaining diploid gynogenesis in sturgeons by radiation. Radiobiologiya 3 no.1:104-110 '63. (MIRA 16:2)

1. Institut biologicheskoy fiziki AN SSSR, Moskva, i Saratovskoye otdeleniye gosudarstvennogo nauchno-issledovatel'skogo instituta ozernogo i rechnogo rybnogo khozyaystva.

(EMBRYOLOGY---FISHES) (RADIATION---PHYSIOLOGICAL EFFECT)

ROMASHOV, F.N.; KAUSEV, I.S.; TEREENT'YEVA, L.M.; NISNEVICH, E.D.; SHPUGA, O.G.

Use of isolated coronary perfusion for the suturing of atrial septal defects under moderate hypothermia. Khirurgiia no.10:43-48 (MIRA 18:8) '64.

1. Otdeleniye vrozhdennykh porokov (zav. V.I.Burakovskiy), laboratoriya anesteziologii (zav. G.A.Ryabov), laboratoriya funktsional'noy diagnostiki (zav. G.G.Gel'shteyn) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR, Moskva.

ROMASHOV, P.N.; ABRAMINOV, G.G.; RUSHANOV, I.I.

Diagnosis and surgical treatment of atresia of the tricuspid valve.
Kardiologiya 5 no.2:80-82 Mr-Apr '65. (MIRA 18:7)

1. Otdeleniye vrozhdennykh porokov serdtsa (zav. - doktor med. nauk V.I.Burakovskiy) i otdeleniye rentgenologii (zav. - doktor med. nauk M.A.Ivanitskaya) Instituta serdechno-sosudistoy khirurgii (direktor - prof. S.A.Kolesnikov; nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR, Moskva.

FOGEL', Ya.M.; MITIN, R.V.; KOZLOV, V.F.; ROMASHKO, N.D.

Applicability of Massey's adiabatic hypothesis to two electron capture processes [with summary in English]. Zhur. eksp. i teor. fiz. 35 no.3:565-573 S '58. (MIRA 12:3)

1.Fiziko-tekhnicheskly institut AN Ukrainskoy SSR.
(Collisions (Nuclear physics))

DEMIRKHANOV, R.A.; KHODYREV, Yu.S.; ROMASHKO, N.D.; NADYKTO, B.T.

Investigation of the discharge caused by a travelling electromagnetic wave. Zhur.tekh.fiz. 32 no.3:313-321 Mr '62. (MIRA 15:4)

(Wave guides) (Electric discharges)

21(0)

AUTHORS:

Fogel', Ya. M., Mitin, R. V., Kozlov, V. P., SOV/56-35-3-2,
Romashko, N. D.

TITLE:

On the Applicability of Massey's Adiabatic Hypothesis to
Double Charge Exchange Processes (O primenimosti adiabaticheskoy
gipotezy Messi k protsessam dvoynoy perezaryadki)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958,
Vol 35, Nr 3, pp 565 - 573 (USSR)

ABSTRACT:

The present paper aims at analyzing the ion velocity
dependence of the effective cross sections for double
charge exchange of some types of ions in inert gases.
The effective cross sections of the following processes
were measured: $H_1^+ \rightarrow H_1^-$ in He, Ne, Ar, Kr, Xe, H_2 , N_2
in the energy interval of 3-65 keV, further $C_1^+ \rightarrow C_1^-$ in
Ar, Kr and Xe (50-65 keV), $O_1^+ \rightarrow O_1^-$ in Ar and Kr (50-65 keV)
 $Cl_1^+ \rightarrow Cl_1^-$ in Xe (50-60 keV) and $P_1^+ \rightarrow P_1^-$ in He, Ne, Ar,
Kr, Xe and H_2 (5-50 keV). Figures 1-6 show the curves σ_{1-1}
(v) for the various ions. Measurements were carried out

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On the Applicability of Massey's Adiabatic Hypothesis to Double Charge Exchange Processes SOV/56-35-3-2/4

according to the mass-spectroscopic method by means of a device which is described in detail (Ref 12). The measurements of cross sections σ_{i-1} for C_1^+ , O_1^+ , Cl_1^+ agree (within the error limits) with those of references 11 and 12, whereas those obtained for $H_1^+ \rightarrow H_1^-$ resulted in values that are lower by 1 1/2 to twice their amount than those of reference 9. It was found that the position of the maxima of the $\sigma_{i-1}(v)$ -curves corresponds to Massey's adiabatic criterion. When carrying out such an analysis it is important to take into consideration the existence of excited ions in the primary beam as well as the formation of slowly excited double-charged ions. Like in the case of the ordinary charge exchange the constant a in the double charge exchange depends slightly on the nature of the ion-molecule pair. (a = distance upon which the forces of interaction between the impinging particles act). The a -value for the double-charge exchange in inert gases (average: 1,5 Å) differs essentially from that in

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On the Applicability of Massey's Adiabatic Hypothesis to SOV/56-35-3-2/6
Double Charge Exchange Processes

molecular gases. According to equation (1)

$a|\Delta E|/\hbar v \gg 1$ the following is given (in Å) for a:

$H^+ - H_2: 2,3$; $O^+ - H_2: 0,9$; $F^+ - H_2: 0,9$; $H^+ - N_2: 2,0$; $Cl^+ - N_2: 0,5$.

In conclusion the authors thank Professor A.K.Val'ter for the interest he displayed in this work. There are 7 figures, 3 tables, and 17 references, 6 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR
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AUTHORS: Demirkhanov, R. A., Khodyrev, Yu. S., Romashko, N. D., and Nadykto, B. T.

TITLE: Discharge induced by electromagnetic travelling wave

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 3, 1962, 313-321

TEXT: The authors studied the parameters of an electrodeless pinched discharge induced by standing and travelling electromagnetic waves in a toroidal 10 cm wide discharge tube. The experimental arrangement is shown in Fig. 1. The power of the h. f. tube generator could be varied continuously from 0 to 10 kw, its frequency from 0.8 to 4 Mcps. Charged particle concentration, electron temperature and space potential were measured with probes. Pinched discharges were observed in Xe, Kr, Ar, He, O₂, N₂, and H₂. The particle concentration from the center of the pinch discharge to the wall decreases more rapidly than would follow from diffusion theory of the positive column. It was found that the minimum diameter of the pinch for all powers of the discharge is reached at a Card 1/2

Discharge induced by electromagnetic ...

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0.02 mm mercury head. The pinch broadens with increasing pressure at powers greater than 200 w and also with increasing power at pressures above 0.03 mm Hg. Up to a certain pressure, electron concentration rises, but it decreases again when pressure is further increased. A monotonous increase of the electron concentration with power was established.

Electron temperature was between $3 \cdot 10^4$ and $6 \cdot 10^4$ °K. The pinching of the discharge plasma is determined essentially by the r-component of the electric field of the wave which, through the non-diffusional departure of electrons from the plasma to the wall, increases the negative potential (with respect to the plasma) of the wall. V. P. Volkov is thanked for assistance. There are 13 figures and 14 references: 6 Soviet and 7 non-Soviet. The four most recent references to English-language publications read as follows: E. R. Harrison. J. of Electr. a. control, 5, 4, 5, 1958; T. H. Y. Young, J. Soyers. Proc. Phys. Soc., 70, no. 45113, 663, 1957; H. A. H. Boot a. R. B. R. Shersby-Harvie. Nature, 18, 1187, 1957; H. A. H. Boot et al. J. of Electr. Control, 4, no. 5, 434, 1958.

SUBMITTED: December 17, 1960

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